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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/077,148	02/15/2002	Michael J. Sullivan	P-5474-D1-C1-C1	5579
24492	7590	11/15/2004	EXAMINER	
THE TOP-FLITE GOLF COMPANY, A WHOLLY OWNED SUBSIDIARY OF CALLAWAY GOLF COMPANY			GORDON, RAEANN	
P.O. BOX 901 425 MEADOW STREET CHICOPEE, MA 01021-0901			ART UNIT	PAPER NUMBER
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/077,148  
Filing Date: February 15, 2002  
Appellant(s): SULLIVAN ET AL.

**MAILED**

**NOV 15 2004**

**GROUP 3700**

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Michelle Bugbee  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 8-20-04.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

No amendment after final has been filed.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is correct.

## **(7) Grouping of Claims**

Appellant's brief includes a statement that claims 38-42, 44-49, and 51-57 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

**(8) *ClaimsAppealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) *Prior Art of Record***

5,779,563 YAMAGISHI et al. 7-1998

## **(10) *Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

Claims 38-42, 44-49 and 51-57 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yamagishi et al (5,779,563). Regarding claim 38, Yamagishi discloses a golf ball comprising a solid core, an inner cover layer and an outer cover layer (abstract). The inner cover layer is made from Himilan, a well-known trade name for ionomer resins (table 4, col. 9). The outer cover layer is made from polyurethane and has a Shore D hardness from 40 to 68 (col. 4, lines 5-16; table 2). With respect to the core PGA compression, appellant discloses the conversion of deformation to PGA compression (spec pages 19-20). The PGA scale is from 0

to 200. For every one thousandth of an inch (0.001) a ball deflects one point is deducted from 200. Yamagishi discloses a core deflection from 2 to 5 mm or 0.079 to 0.197 inch, which converts to a core PGA compression from 3 to 121. Regarding claim 40, Yamagishi discloses the ball has a diameter of 42.7 mm or 1.68 inches (table 4). Regarding claim 42, the outer cover layer has a Shore D hardness from 40 to 68 (col. 4, line 7). Regarding claims 44 and 45, the outer cover layer has a thickness from 0.3 to 2.5 mm or 0.01 to 0.098 inch (col. 4, lines 35-37). Regarding claim 47, the solid core is made from a polybutadiene (col. 3, lines 2-7). The outer cover layer is made from polyurethane and has a Shore D hardness from 40 to 68 (col. 4, lines 5-16). With respect to the core PGA compression, appellant discloses the conversion of deformation to PGA compression (spec pages 19-20). The PGA scale is from 0 to 200. For every one thousandth of an inch (0.001) a ball deflects one point is deducted from 200. Yamagishi discloses a core deflection from 2 to 5 mm or 0.079 to 0.197 inch, which converts to a core PGA compression from 3 to 121. Regarding claims 51 and 52, the outer cover layer has a thickness from 0.3 to 2.5 mm or 0.01 to 0.098 inch (col. 4, lines 35-37). Regarding claim 53, the solid core is made from a polybutadiene (col. 3, lines 2-7). The inner cover layer is made from Himilan, a well-known trade name for ionomer resins (table 4, col. 9). The outer cover layer is made from polyurethane and has a Shore D hardness from 40 to 68 (col. 4, lines 5-16). With respect to the core PGA compression, appellant discloses the conversion of deformation to PGA compression (spec pages 19-20). The PGA scale is from 0 to 200. For every one thousandth of an inch (0.001) a ball

deflects one point is deducted from 200. Yamagishi discloses a core deflection from 2 to 5 mm or 0.079 to 0.197 inch, which converts to a core PGA compression from 3 to 121. Regarding claim 55, the ball has a diameter of 42.7 mm or 1.68 inches (table 4). Regarding claims 38, 39, 41, 48, 54, and 56 appellant claims PGA ball compression and coefficient of restitution, the properties will overlap the properties of Yamagishi. Yamagishi discloses a solid golf ball comprising a polybutadiene core, an ionomeric inner cover, and a polyurethane outer cover. Appellant claims the same materials disclosed by Yamagishi for each layer. Furthermore, although Yamagishi is silent to the properties one skilled in the golf ball art is aware that nearly all golf balls have a PGA compression between 70 and 100. Golf balls outside this range are usually discarded. Golf balls with a very low PGA compression are too soft for use and golf ball with a very high PGA compression are too hard. The coefficient of restitution (COR) also has a common range in the golfing art between 0.7 and 0.8. Golf balls do not have low COR values because the collision between the ball and club would not be satisfactory and would not give the ball proper initial velocity. In regards to claims 46, 49, and 57, Yamagishi discloses appellant's invention therefore the performance features such as mechanical impedance will also be the same as appellants. One of ordinary skill in the art would have modified Yamagishi to achieve the optimal initial velocity and spin of the golf ball.

**(11) Response to Argument**

Appellant advances arguments regarding the compression values of the golf ball core and the golf ball only. Specifically appellant argues the compression of Yamagishi cannot be converted to the PGA compression claimed by appellant. Yamagishi discloses a core distortion from 2 to 5 mm or 0.079 to 0.197 inch, which converts to a core PGA compression from 3 to 121. The deflection was converted by using the conversion in appellant's specification as shown in the rejection above. Appellant argues the range disclosed by Yamagishi cannot be converted because the loads are different. Specifically, appellant gives two factors, 1) preload, total load, loading rate and 2) 10% load difference. With respect to appellant's first argument (1) regarding preload, total load, and loading rate appellant's position is not understood. The specification (page 20) of the present invention clearly states the PGA compression is taken at a load of 200 lbs. Yamagishi, discloses the distortion is taken at a load of 100 kg. It is not clear why appellant is now attempting to state factors, such as preloads and/or total loads, which are not disclosed by Yamagishi when the instant invention also fails to disclose such features. If the preloads and other factors are critical appellant has failed to prove the criticality by not providing the preload and/or total load values in the specification or through out the entire prosecution. With respect to the appellant's second argument (2) regarding the 10% difference in the loads between the instant invention and the present invention appellant's position is not persuasive. The present invention discloses a load of 200 lbs while Yamagishi discloses a load of 100 kg or 220 lbs.

Appellant further discloses the 200 lb load provides a PGA compression value less than 55 for the core. Yamagishi discloses a distortion from 2 to 5 mm or 0.079 to 0.197 inch, which converts to a core PGA compression from 3 to 121. It is clear there is a 10% difference in the load, however the difference does not render a distinction between the ranges for the core compression values.

Appellant claims a core compression less than 55 while Yamagishi provides a converted core compression from 3 to 121. Even if the load of Yamagishi is lowered by 10% to parallel appellant's load the compression would only increase the lower end of the range. Since the lower end of the range is 3, a 10% decrease in the load would not be substantial enough to increase the lower end of the range (3) outside of the range claimed by applicant (55 or less).

In response to appellant's statement that the burden is on the Examiner to provide some technical reasoning to support inherency or obviousness, the Examiner has provided the evidence in the rejection above. The present invention claims a golf ball comprising a core, an inner cover layer, and an outer cover layer. The core compression of Yamamgishi overlaps the range of appellant's core as shown above. Yamagishi further discloses a core made from polybutadiene, an inner cover layer made from an ionomer, and an outer cover layer made from a polyurethane with a hardness that overlaps applicant's hardness. Since the materials as well as properties of the layers have been shown to overlap applicant's the properties of the completed golf ball must also overlaps applicant's, i.e., ball compression and COR. Moreover, nearly all golf balls have a PGA compression between 70 and 100 (appellant claims less than

80). Golf balls outside this range are usually discarded. Golf balls with a very low PGA compression are too soft for use and golf ball with a very high PGA compression are too hard.

In conclusion, it is submitted the present invention is not patentable over Yamagishi for the following reasons: 1) the materials and the cover hardness value as claimed by appellant are the same materials disclosed by Yamagishi and 2) the core compression values claimed by appellant clearly overlap the values disclosed by Yamagishi as shown above.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



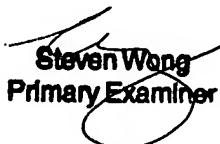
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